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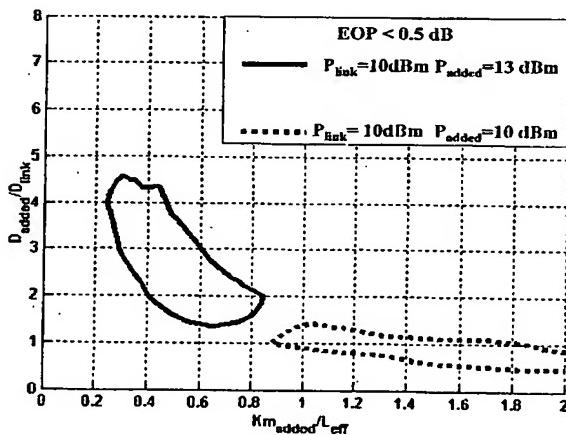
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(54) Title: OPTICAL TRANSMISSION SYSTEM USING AN OPTICAL PHASE CONJUGATION DEVICE



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(57) Abstract: An optical system (10) comprises an optical fiber path (12) suitable for propagating an optical signal at least in a first direction, and a plurality M of optical line amplifiers (13¹...13⁶), disposed along said optical fiber path (12), so as to divide said optical fiber path in N spans of optical fiber (14¹...14⁵). The spans of optical fiber comprise at least one transmission optical fiber having an effective length L_{eff} . An optical phase conjugation device (15) is associated to one of the amplifiers of said plurality of amplifiers, and is disposed in combination with an optical fiber length (16) having the same sign of dispersion of said transmission optical fiber and a higher dispersion coefficient at a wavelength of said optical signal. The additional accumulated dispersion introduced by the optical fiber length is nearly equal to the dispersion accumulated in an effective length L_{eff} of transmission fiber. A further optical amplifier (19) is associated to the optical fiber length (16).